

SEQUENCE LISTING

<110> Vinkemeier, Uwe
Darnell Jr., James E.

<120> PURIFIED STAT PROTEINS AND METHODS OF PURIFYING THEREOF

<130> 600-1-182 N

<140> 08/951,130

<141> 1997-10-15

<150> 60/028,176

<151> 1996-10-15

<160> 16

<170> PatentIn Ver. 2.0

<210> 1

<211> 750

<212> PRT

<213> Homo sapiens

<400> 1

Met	Ser	Gln	Trp	Tyr	Glu	Leu	Gln	Gln	Leu	Asp	Ser	Lys	Phe	Leu	Glu
1				5					10					15	

Gln	Val	His	Gln	Leu	Tyr	Asp	Asp	Ser	Phe	Pro	Met	Glu	Ile	Arg	Gln
			20					25						30	

Tyr	Leu	Ala	Gln	Trp	Leu	Glu	Lys	Gln	Asp	Trp	Glu	His	Ala	Ala	Asn
		35					40					45			

Asp	Val	Ser	Phe	Ala	Thr	Ile	Arg	Phe	His	Asp	Leu	Leu	Ser	Gln	Leu
	50						55				60				

Asp	Asp	Gln	Tyr	Ser	Arg	Phe	Ser	Leu	Glu	Asn	Asn	Phe	Leu	Leu	Gln
65					70					75				80	

His	Asn	Ile	Arg	Lys	Ser	Lys	Arg	Asn	Leu	Gln	Asp	Asn	Phe	Gln	Glu
				85					90					95	

Asp	Pro	Ile	Gln	Met	Ser	Met	Ile	Ile	Tyr	Ser	Cys	Leu	Lys	Glu	Glu
				100					105					110	

Arg	Lys	Ile	Leu	Glu	Asn	Ala	Gln	Arg	Phe	Asn	Gln	Ala	Gln	Ser	Gly
		115					120						125		

Asn Ile Gln Ser Thr Val Met Leu Asp Lys Gln Lys Glu Leu Asp Ser
 130 135 140

Lys Val Arg Asn Val Lys Asp Lys Val Met Cys Ile Glu His Glu Ile
 145 150 155 160

Lys Ser Leu Glu Asp Leu Gln Asp Glu Tyr Asp Phe Lys Cys Lys Thr
 165 170 175

Leu Gln Asn Arg Glu His Glu Thr Asn Gly Val Ala Lys Ser Asp Gln
 180 185 190

Lys Gln Glu Gln Leu Leu Leu Lys Lys Met Tyr Leu Met Leu Asp Asn
 195 200 205

Lys Arg Lys Glu Val Val His Lys Ile Ile Glu Leu Leu Asn Val Thr
 210 215 220

Glu Leu Thr Gln Asn Ala Leu Ile Asn Asp Glu Leu Val Glu Trp Lys
 225 230 235 240

Arg Arg Gln Gln Ser Ala Cys Ile Gly Gly Pro Pro Asn Ala Cys Leu
 245 250 255

Asp Gln Leu Gln Asn Trp Phe Thr Ile Val Ala Glu Ser Leu Gln Gln
 260 265 270

Val Arg Gln Gln Leu Lys Lys Leu Glu Glu Leu Glu Gln Lys Tyr Thr
 275 280 285

Tyr Glu His Asp Pro Ile Thr Lys Asn Lys Gln Val Leu Trp Asp Arg
 290 295 300

Thr Phe Ser Leu Phe Gln Gln Leu Ile Gln Ser Ser Phe Val Val Glu
 305 310 315 320

Arg Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro Leu Val Leu Lys
 325 330 335

Thr Gly Val Gln Phe Thr Val Lys Leu Arg Leu Leu Val Lys Leu Gln
 340 345 350

Glu Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe Asp Lys Asp Val
 355 360 365

Asn Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe Asn Ile Leu Gly
 370 375 380

Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr Asn Gly Ser Leu
 385 390 395 400

Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly
 405 410 415

Thr Arg Thr Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser
 420 425 430

Leu Ser Phe Glu Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu
 435 440 445

Glu Thr Thr Ser Leu Pro Val Val Val Ile Ser Asn Val Ser Gln Leu
 450 455 460

Pro Ser Gly Trp Ala Ser Ile Leu Trp Tyr Asn Met Leu Val Ala Glu
 465 470 475 480

Pro Arg Asn Leu Ser Phe Phe Leu Thr Pro Pro Cys Ala Arg Trp Ala
 485 490 495

Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser Val Thr Lys Arg
 500 505 510

Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu Leu Gly
 515 520 525

Pro Asn Ala Ser Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys
 530 535 540

Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser
 545 550 555 560

Ile Leu Glu Leu Ile Lys Lys His Leu Leu Pro Leu Trp Asn Asp Gly
 565 570 575

Cys Ile Met Gly Phe Ile Ser Lys Glu Arg Glu Arg Ala Leu Leu Lys
 580 585 590

Asp Gln Gln Pro Gly Thr Phe Leu Leu Arg Phe Ser Glu Ser Ser Arg
 595 600 605

Glu Gly Ala Ile Thr Phe Thr Trp Val Glu Arg Ser Gln Asn Gly Gly
 610 615 620

Glu Pro Asp Phe His Ala Val Glu Pro Tyr Thr Lys Lys Glu Leu Ser
 625 630 635 640

Ala Val Thr Phe Pro Asp Ile Ile Arg Asn Tyr Lys Val Met Ala Ala
645 650 655

Glu Asn Ile Pro Glu Asn Pro Leu Lys Tyr Leu Tyr Pro Asn Ile Asp
660 665 670

Lys Asp His Ala Phe Gly Lys Tyr Tyr Ser Arg Pro Lys Glu Ala Pro
675 680 685

Glu Pro Met Glu Leu Asp Gly Pro Lys Gly Thr Gly Tyr Ile Lys Thr
690 695 700

Glu Leu Ile Ser Val Ser Glu Val His Pro Ser Arg Leu Gln Thr Thr
705 710 715 720

Asp Asn Leu Leu Pro Met Ser Pro Glu Glu Phe Asp Glu Val Ser Arg
725 730 735

Ile Val Gly Ser Val Glu Phe Asp Ser Met Met Asn Thr Val
740 745 750

<210> 2

<211> 712

<212> PRT

<213> Homo sapiens

<400> 2

Met Ser Gln Trp Tyr Glu Leu Gln Gln Leu Asp Ser Lys Phe Leu Glu
1 5 10 15

Gln Val His Gln Leu Tyr Asp Asp Ser Phe Pro Met Glu Ile Arg Gln
20 25 30

Tyr Leu Ala Gln Trp Leu Glu Lys Gln Asp Trp Glu His Ala Ala Asn
35 40 45

Asp Val Ser Phe Ala Thr Ile Arg Phe His Asp Leu Leu Ser Gln Leu
50 55 60

Asp Asp Gln Tyr Ser Arg Phe Ser Leu Glu Asn Asn Phe Leu Leu Gln
65 70 75 80

His Asn Ile Arg Lys Ser Lys Arg Asn Leu Gln Asp Asn Phe Gln Glu
85 90 95

Asp Pro Ile Gln Met Ser Met Ile Ile Tyr Ser Cys Leu Lys Glu Glu

100

105

110

Arg Lys Ile Leu Glu Asn Ala Gln Arg Phe Asn Gln Ala Gln Ser Gly
 115 120 125

Asn Ile Gln Ser Thr Val Met Leu Asp Lys Gln Lys Glu Leu Asp Ser
 130 135 140

Lys Val Arg Asn Val Lys Asp Lys Val Met Cys Ile Glu His Glu Ile
 145 150 155 160

Lys Ser Leu Glu Asp Leu Gln Asp Glu Tyr Asp Phe Lys Cys Lys Thr
 165 170 175

Leu Gln Asn Arg Glu His Glu Thr Asn Gly Val Ala Lys Ser Asp Gln
 180 185 190

Lys Gln Glu Gln Leu Leu Leu Lys Lys Met Tyr Leu Met-Leu Asp Asn
 195 200 205

Lys Arg Lys Glu Val Val His Lys Ile Ile Glu Leu Leu Asn Val Thr
 210 215 220

Glu Leu Thr Gln Asn Ala Leu Ile Asn Asp Glu Leu Val Glu Trp Lys
 225 230 235 240

Arg Arg Gln Gln Ser Ala Cys Ile Gly Gly Pro Pro Asn Ala Cys Leu
 245 250 255

Asp Gln Leu Gln Asn Trp Phe Thr Ile Val Ala Glu Ser Leu Gln Gln
 260 265 270

Val Arg Gln Gln Leu Lys Lys Leu Glu Glu Leu Glu Gln Lys Tyr Thr
 275 280 285

Tyr Glu His Asp Pro Ile Thr Lys Asn Lys Gln Val Leu Trp Asp Arg
 290 295 300

Thr Phe Ser Leu Phe Gln Gln Leu Ile Gln Ser Ser Phe Val Val Glu
 305 310 315 320

Arg Gln Pro Cys Met Pro Thr His Pro Gln Arg Pro Leu Val Leu Lys
 325 330 335

Thr Gly Val Gln Phe Thr Val Lys Leu Arg Leu Leu Val Lys Leu Gln
 340 345 350

Glu Leu Asn Tyr Asn Leu Lys Val Lys Val Leu Phe Asp Lys Asp Val

355

360

365

Asn Glu Arg Asn Thr Val Lys Gly Phe Arg Lys Phe Asn Ile Leu Gly
370 375 380

Thr His Thr Lys Val Met Asn Met Glu Glu Ser Thr Asn Gly Ser Leu
385 390 395 400

Ala Ala Glu Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly
405 410 415

Thr Arg Thr Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser
420 425 430

Leu Ser Phe Glu Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu
435 440 445

Glu Thr Thr Ser Leu Pro Val Val Val Ile Ser Asn Val Ser Gln Leu
450 455 460

Pro Ser Gly Trp Ala Ser Ile Leu Trp Tyr Asn Met Leu Val Ala Glu
465 470 475 480

Pro Arg Asn Leu Ser Phe Phe Leu Thr Pro Pro Cys Ala Arg Trp Ala
485 490 495

Gln Leu Ser Glu Val Leu Ser Trp Gln Phe Ser Ser Val Thr Lys Arg
500 505 510

Gly Leu Asn Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu Leu Gly
515 520 525

Pro Asn Ala Ser Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys
530 535 540

Glu Asn Ile Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser
545 550 555 560

Ile Leu Glu Leu Ile Lys Lys His Leu Leu Pro Leu Trp Asn Asp Gly
565 570 575

Cys Ile Met Gly Phe Ile Ser Lys Glu Arg Glu Arg Ala Leu Leu Lys
580 585 590

Asp Gln Gln Pro Gly Thr Phe Leu Leu Arg Phe Ser Glu Ser Ser Arg
595 600 605

Glu Gly Ala Ile Thr Phe Thr Trp Val Glu Arg Ser Gln Asn Gly Gly

610

615

620

Glu Pro Asp Phe His Ala Val Glu Pro Tyr Thr Lys Lys Glu Leu Ser
625 630 635 640

Ala Val Thr Phe Pro Asp Ile Ile Arg Asn Tyr Lys Val Met Ala Ala
645 650 655

Glu Asn Ile Pro Glu Asn Pro Leu Lys Tyr Leu Tyr Pro Asn Ile Asp
660 665 670

Lys Asp His Ala Phe Gly Lys Tyr Tyr Ser Arg Pro Lys Glu Ala Pro
675 680 685

Glu Pro Met Glu Leu Asp Gly Pro Lys Gly Thr Gly Tyr Ile Lys Thr
690 695 700

Glu Leu Ile Ser Val Ser Glu Val
705 710

<210> 3

<211> 582

<212> PRT

<213> Homo sapiens

<400> 3

Ser Thr Val Met Leu Asp Lys Gln Lys Glu Leu Asp Ser Lys Val Arg
1 5 10 15

Asn Val Lys Asp Lys Val Met Cys Ile Glu His Glu Ile Lys Ser Leu
20 25 30

Glu Asp Leu Gln Asp Glu Tyr Asp Phe Lys Cys Lys Thr Leu Gln Asn
35 40 45

Arg Glu His Glu Thr Asn Gly Val Ala Lys Ser Asp Gln Lys Gln Glu
50 55 60

Gln Leu Leu Leu Lys Lys Met Tyr Leu Met Leu Asp Asn Lys Arg Lys
65 70 75 80

Glu Val Val His Lys Ile Ile Glu Leu Leu Asn Val Thr Glu Leu Thr
85 90 95

Gln Asn Ala Leu Ile Asn Asp Glu Leu Val Glu Trp Lys Arg Arg Gln
100 105 110

Gln Ser Ala Cys Ile Gly Gly Pro Pro Asn Ala Cys Leu Asp Gln Leu
 115 120 125

Gln Asn Trp Phe Thr Ile Val Ala Glu Ser Leu Gln Gln Val Arg Gln
 130 135 140

Gln Leu Lys Lys Leu Glu Glu Leu Glu Gln Lys Tyr Thr Tyr Glu His
 145 150 155 160

Asp Pro Ile Thr Lys Asn Lys Gln Val Leu Trp Asp Arg Thr Phe Ser
 165 170 175

Leu Phe Gln Gln Leu Ile Gln Ser Ser Phe Val Val Glu Arg Gln Pro
 180 185 190

Cys Met Pro Thr His Pro Gln Arg Pro Leu Val Leu Lys Thr Gly Val
 195 200 205

Gln Phe Thr Val Lys Leu Arg Leu Leu Val Lys Leu Gln Glu Leu Asn
 210 215 220

Tyr Asn Leu Lys Val Lys Val Leu Phe Asp Lys Asp Val Asn Glu Arg
 225 230 235 240

Asn Thr Val Lys Gly Phe Arg Lys Phe Asn Ile Leu Gly Thr His Thr
 245 250 255

Lys Val Met Asn Met Glu Glu Ser Thr Asn Gly Ser Leu Ala Ala Glu
 260 265 270

Phe Arg His Leu Gln Leu Lys Glu Gln Lys Asn Ala Gly Thr Arg Thr
 275 280 285

Asn Glu Gly Pro Leu Ile Val Thr Glu Glu Leu His Ser Leu Ser Phe
 290 295 300

Glu Thr Gln Leu Cys Gln Pro Gly Leu Val Ile Asp Leu Glu Thr Thr
 305 310 315 320

Ser Leu Pro Val Val Val Ile Ser Asn Val Ser Gln Leu Pro Ser Gly
 325 330 335

Trp Ala Ser Ile Leu Trp Tyr Asn Met Leu Val Ala Glu Pro Arg Asn
 340 345 350

Leu Ser Phe Phe Leu Thr Pro Pro Cys Ala Arg Trp Ala Gln Leu Ser
 355 360 365

Glu Val Leu Ser Trp Gln Phe Ser Ser Val Thr Lys Arg Gly Leu Asn
 370 375 380

Val Asp Gln Leu Asn Met Leu Gly Glu Lys Leu Leu Gly Pro Asn Ala
 385 390 395 400

Ser Pro Asp Gly Leu Ile Pro Trp Thr Arg Phe Cys Lys Glu Asn Ile
 405 410 415

Asn Asp Lys Asn Phe Pro Phe Trp Leu Trp Ile Glu Ser Ile Leu Glu
 420 425 430

Leu Ile Lys Lys His Leu Leu Pro Leu Trp Asn Asp Gly Cys Ile Met
 435 440 445

Gly Phe Ile Ser Lys Glu Arg Glu Arg Ala Leu Leu Lys Asp Gln Gln
 450 455 460

Pro Gly Thr Phe Leu Leu Arg Phe Ser Glu Ser Ser Arg Glu Gly Ala
 465 470 475 480

Ile Thr Phe Thr Trp Val Glu Arg Ser Gln Asn Gly Gly Glu Pro Asp
 485 490 495

Phe His Ala Val Glu Pro Tyr Thr Lys Lys Glu Leu Ser Ala Val Thr
 500 505 510

Phe Pro Asp Ile Ile Arg Asn Tyr Lys Val Met Ala Ala Glu Asn Ile
 515 520 525

Pro Glu Asn Pro Leu Lys Tyr Leu Tyr Pro Asn Ile Asp Lys Asp His
 530 535 540

Ala Phe Gly Lys Tyr Tyr Ser Arg Pro Lys Glu Ala Pro Glu Pro Met
 545 550 555 560

Glu Leu Asp Gly Pro Lys Gly Thr Gly Tyr Ile Lys Thr Glu Leu Ile
 565 570 575

Ser Val Ser Glu Val His
 580

<210> 4

<211> 131

<212> PRT

<213> Homo sapiens

<400> 4

Met Ser Gln Trp Tyr Glu Leu Gln Gln Leu Asp Ser Lys Phe Leu Glu
1 5 10 15

Gln Val His Gln Leu Tyr Asp Asp Ser Phe Pro Met Glu Ile Arg Gln
20 25 30

Tyr Leu Ala Gln Trp Leu Glu Lys Gln Asp Trp Glu His Ala Ala Asn
35 40 45

Asp Val Ser Phe Ala Thr Ile Arg Phe His Asp Leu Leu Ser Gln Leu
50 55 60

Asp Asp Gln Tyr Ser Arg Phe Ser Leu Glu Asn Asn Phe Leu Leu Gln
65 70 75 80

His Asn Ile Arg Lys Ser Lys Arg Asn Leu Gln Asp Asn Phe Gln Glu
85 90 95

Asp Pro Ile Gln Met Ser Met Ile Ile Tyr Ser Cys Leu Lys Glu Glu
100 105 110

Arg Lys Ile Leu Glu Asn Ala Gln Arg Phe Asn Gln Ala Gln Ser Gly
115 120 125

Asn Ile Gln
130

<210> 5

<211> 1746

<212> DNA

<213> Homo sapiens

<400> 5

agcacagtga tgtagacaa acagaaagag cttgacagta aagtcagaaa tgtgaaggac 60
aaggttatgt gtatagagca tgaaatcaag agcctggaag atttacaaga tgaatatgac 120
ttcaaatgca aaaccttgca gaacagagaa cagagacca atggtgtggc aaagagtgat 180
cagaaacaag aacagctggt actcaagaag atgtatttaa tgcttgacaa taagagaaaag 240
gaagtagttc aaaaaataat agagttgctg aatgtcactg aacttaccca gaatgcctg 300
attaatgatg aactagtgga gtggaagcgg agacagcaga gcgcctgtat tggggggccg 360
cccaatgctt gcttggatca gctgcagaac tggttcacta tagttgcgga gagtctgcag 420
caagttcggc agcagcttaa aaagttggag gaattggaac agaaatacac ctacgaacat 480
gacctatca caaaaaacaa acaagtgtta tgggaccgca cttcagttt tttccagcag 540
ctcattcaga gctcgtttgt ggtggaaaga cagccctgca tgccaacgca ccctcagagg 600
ccgctgggtct tgaagacagg ggtccagttc actgtgaagt tgagactggt ggtgaaattg 660
caagagctga attataattt gaaagtcaaa gtcttatttg ataaagatgt gaatgagaga 720
aatacagtaa aaggatttag gaagttcaac attttgggca cgcacacaaa agtgatgaac 780

atggaggagt	ccaccaatgg	cagtctggcg	gctgaatttc	ggcacctgca	attgaaagaa	840
cagaaaaatg	ctggcaccag	aacgaatgag	ggctcctctca	tcgttactga	agagcttcac	900
tcccttagtt	ttgaaaccca	attgtgccag	cctgggtttgg	taattgacct	cgagacgacc	960
tctctgcccc	ttgtggtgat	ctccaacgtc	agccagctcc	cgagcggttg	ggcctccatc	1020
ctttggtaca	acatgctggt	ggcggaaccc	aggaatctgt	ccttcttcct	gactccacca	1080
tgtgcacgat	gggctcagct	ttcagaagtg	ctgagttggc	agttttcttc	tgtcaccaaa	1140
agaggtctca	atgtggacca	gctgaacatg	ttgggagaga	agcttcttgg	tcctaacgcc	1200
agccccgatg	gtctcattcc	gtggacgagg	ttttgtaagg	aaaatataaa	tgataaaaaat	1260
tttcccttct	ggctttggat	tgaaagcatt	ctagaactca	ttaaaaaaca	cctgctccct	1320
ctctggaatg	atgggtgcat	catgggcttc	atcagcaagg	agcgagagcg	tgccctgttg	1380
aaggaccagc	agccggggac	cttctctgtg	cggttcagtg	agagctcccg	ggaagggggc	1440
atcacattca	catgggtgga	gcggtcccag	aacggaggcg	aacctgactt	ccatgcggtt	1500
gaaccctaca	cgaagaaaga	actttctgct	gttactttcc	ctgacatcat	tcgcaattac	1560
aaagtcatgg	ctgctgagaa	tattcctgag	aatcccttga	agtatctgta	tccaaatatt	1620
gacaaagacc	atgccttttg	aaagtattac	tccaggccaa	aggaagcacc	agagccaatg	1680
gaacttgatg	gccctaaagg	aactggatat	atcaagactg	agttgatttc	tgtgtctgaa	1740
gttcac						1746

<210> 6
 <211> 393
 <212> DNA
 <213> Homo sapiens

atgtctcagt	ggtacgaact	tcagcagctt	gactcaaaat	tcctggagca	ggttcaccag	60
ctttatgatg	acagttttcc	catggaaatc	agacagtacc	tggcacagtg	gttagaaaag	120
caagactggg	agcacgctgc	caatgatgtt	tcatttgcca	ccatccgttt	tcattgacctc	180
ctgtcacagc	tggatgatca	atatagtcgc	ttttcttttg	agaataactt	cttgctacag	240
cataacataa	ggaaaagcaa	gcgtaatctt	caggataatt	ttcaggaaga	cccaatccag	300
atgtctatga	tcattttacag	ctgtctgaag	gaagaaagga	aaattctgga	aaacgcccag	360
agattttaatc	aggctcagtc	ggggaatatt	cag			393

<210> 7
 <211> 36
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:primer

gggaattcca	tatgagcaca	gtgatgttag	acaaac	36
------------	------------	------------	--------	----

<210> 8
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 8
cggatcctat tagtgaactt cagacacaga aatc

34

<210> 9
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 9
gtattcccgt caatgca

17

<210> 10
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 10
gtattcctgt aagatct

17

<210> 11
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 11
gatttcccgt aaatcat

17

<210> 12
<211> 17
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer

<400> 12

gttggtccgg gaaaagg

17

<210> 13

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 13

agtcagttcc cgtcaatgca tcaggttccc gtcaatgcat

40

<210> 14

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 14

agtcagttcc cgtcaatgag ttcccgtaa tgca

34

<210> 15

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 15

agtcagttcc cgtcaatgat cgctacagag ttcccgtaa gca

43

<210> 16

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:primer

<400> 16

agtcatttcc cgtcaatgca tcagttgacg ggaaagtagt

40